REMARKS

Claims 1-28, 42 and 43 are rejected under 35 U.S.C. §103(a) as being unpatentable over Bjurenvall, U.S. Patent No. 7,005,155, in view of Burrows et al., U.S. Patent No. 4,435,429.

Claim 1 as amended is directed to process for the wet fractionation of cereal bran components, wherein bran, being the fibrous-residue resulting from a primary grain milling, i.e. after the separation of the endosperm fraction, of wheat, rice, barley, oat, rye and triticale, and having variable chemical compositions, presence of anti-nutritive factors, and presence of various anatomical fractions, i.e. pericarp, germ, and residual endosperm is subjected to a first enzymatic treatment utilizing a combination of enzymes of the group starch- hydrolysing enzymes, and aqueous wet milling, followed by an optional step of enzyme inactivation by wet heat treatment, and a subsequent step whereby the resultant aqueous slurry/suspension is separated into an insoluble fibrous fraction and a soluble fraction. The soluble fraction is further separated by centrifugal forces into a germ-rich fraction and an endosperm and sugar-rich fraction, and that the proteins and sugars contained in the endosperm-rich fraction are separated. The insoluble fibrous fraction contain a cleaned bran consisting of both insoluble pericap and aleurone fractions, are further hydrolysed by a second enzymatic treatment utilizing a combination of one or a mixture of enzymes of the group non-starch polysaccharidases, and aqueous wet-milling, followed by an optional step of enzyme inactivation by wet heat treatment, and a subsequent step whereby the resultant hydrolysate is separated into an insoluble phase and a soluble phase.

The starting materials of the Applicants' invention are not the same as those in Bjurenvall et al.'155. In Bjurenvall et al. the starting fraction is bran and flour, whereas the

starting material in the present patent application is only bran. Bran is defined as the seed coat of cereal grains such as wheat, barley, rye, triticale, oat or rice. Anatomically, bran comprises the outer layers of the seed, known as the pericarp-testa and an inner layer known as the aleurone layer, which is often classified as the outermost layer of the endosperm. Cereal bran is therefore defined as the remaining material after the conventional milling or polishing of cereal grains and contains primarily pericarp-testa and aleurone layer components, along with the cereal germ and residual parts of the endosperm. The relative amounts of each component will depend upon the type of cereal and milling technique applied (see the definition in paragraph 0002 of the publication). Thus, this material is not the same starting material as in Bjurenvall et al. and therefore the two processes will not result in fractions having the same composition. Additionally, the main goal of the process described in Fig. 2 of Bjurenvall et al., is to obtain substantially pure glucose syrup. The other fractions are discarded or at least not collected for any further purpose.

In the amended claim 1, the insoluble fibrous fraction obtained after the first enzymatic hydrolysis is further hydrolyzed enzymatically to facilitate the subsequent separation into the different fractions (i.e. insoluble fibers, aleurone cell proteins, hemicellulose and oligosaccharides) using only centrifugation, size exclusion or decantation techniques. These additional steps are not completed in Bjurenvall et al.

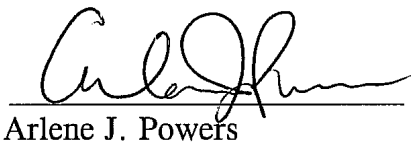
The Examiner cited Burrows et al.'429 to disclose using centrifugation to separate fractures. The combination of the cited references does not teach or suggest the Applicants' invention. As listed above the starting materials are different, the obtained fractions are different and thus the end products are different.

In view of the foregoing, the Applicants do not believe the teachings of Bjurenvall, U.S. Patent No. 7,005,155, in view of Burrows et al., U.S. Patent No. 4,435,429 do not establish a *prima facie* case of obviousness under the provisions of 35 USC §103(a). Thus, claims 1-4, 6-8, 10-28, 31, 33-34, 36-38, and 42-44 are considered to be patentably distinguishable over the prior art of record and should be allowed.

The application is now considered to be in condition for allowance, and an early indication of same is earnestly solicited.

The Commissioner is authorized to charge any extension and/or fee that is required to Deposit Order Account 19-0079

Respectfully submitted,



Arlene J. Powers
Registration No. 35,985
Gauthier & Connors LLP
225 Franklin Street, Suite 2300
Boston, Massachusetts 02110
Telephone: (617) 426-9180
Extension 110